

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

VOL. II

NOVEMBER

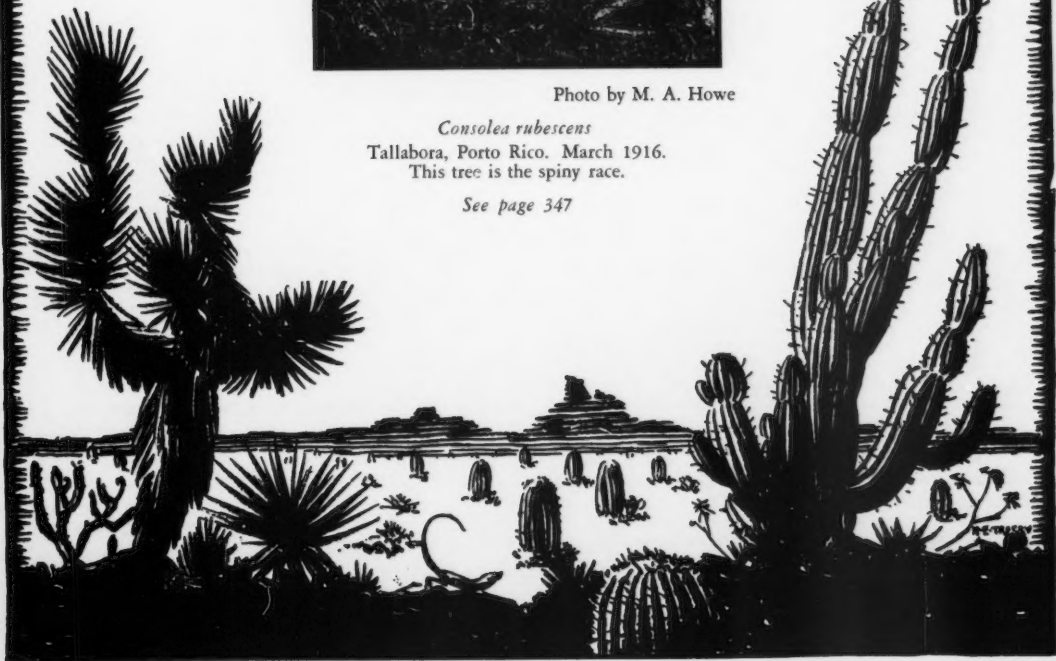
No. 5



Photo by M. A. Howe

Consolea rubescens
Tallabora, Porto Rico. March 1916.
This tree is the spiny race.

See page 347



Journal of the
CACTUS AND SUCCULENT SOCIETY OF AMERICA

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THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

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A monthly magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this Journal for purposes of identification. (Membership and subscription \$3.00 per year, foreign \$3.50.) Mail membership application and subscription to the Secretary, Mr. W. M. Ketteringham, 610 West 65th Street, Los Angeles, Calif.

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PRESIDENT'S COLUMN

A member sends me the following list of plants, recently stolen from his garden. If any reader should see in their travels about the city or nearby towns, plants that answer this description, let me know and I will see that justice is done. The owner can positively identify these plants which will insure a conviction: Several large *Gasterias*; one *Euphorbia officinarum* about two feet tall with 2 long side branches (and 5 short branches) from top; one *Cereus monstrosus*, two feet six inches tall with two well defined branches and several smaller ones (the plant body has a yellow cast); and a rooted cutting of *Pachycereus* about six inches in diameter and eight inches tall.

I am offering the following experiments and would like to receive comments from some of our more learned readers:

A year ago last spring I placed a flat glass pint bottle over an *Opuntia vulgaris* branch that was only just starting and let it grow into the bottle until it reached the bottom but left nearly half the space unfilled. It grew in such a manner that it completely filled the neck and quite effectively sealed the bottle. In growing, its natural respiration accumulated in the bottle to an extent equal to about the bulk of the branch. I removed it from the plant in August and set the bottle in the glass house. There was no apparent change in the moisture content or size or condition of the plant until the growing season started last spring at which time rootlets began to show at some of the areoles. Soon, two new branches started at the end which was pointed down. As the bottle stood on the shelf, this

new growth started up through the liquid in the bottle and for nourishment drew on the main branch to the extent that it began to shrink. When this shrinking extended through the neck of the bottle and let in the air, the entire plant rooted in less than a week. At that time the plant was just a year and two months old.

This spring I repeated the experiment. The growth was such that a crease formed through the neck of the bottle which permitted the passage of air. As a consequence only about a tablespoonful of moisture accumulated in the bottle. I removed it from the plant in August and in about 10 days all the moisture had disappeared. I then filled the bottle with water. A little algae has formed in the bottle but to date no other change has taken place and the plant is three-fourths submerged. In the first instance the liquid in the bottle was from the plant and could perhaps be expected not to cause rot and it did not until air entered the bottle. In the second instance the liquid was ordinary water with a free passage of air. We could expect rot as we are taught that too much water will cause our plants to rot quickly. Perhaps this proves that succulent plants are so constituted that they can resist moisture as well as retain moisture. Some succulents grow in swamps, even in salt marsh swamps. I have removed succulent plants from salt marshes and planted them in the driest part of my garden and they have continued to thrive, showing that they were resisting moisture in their native state rather than living on moisture.

These experiments perhaps refute the theory that plants obtain moisture from the dew.

Mesemb.

By N. E. BROWN

The group of curious and beautiful plants familiarly known as Cacti, are, with the exception of a few species found in tropical Africa, Natal and Madagascar, practically confined to the warmer and drier regions of North and South America.

Similarly we have the plants familiarly known as Mesembryanthemums (or Mesembs as they are frequently called) forming a group that is practically confined to Africa (chiefly the southern part of it), with a few outliers along the coast of the Mediterranean (where I think it probable they have been introduced from South Africa), Arabia, Australia, New Zealand and the Pacific Coast of North and South America.

At first sight these two groups appear to have nothing in common except that both are composed of succulent plants, and that to a certain extent the spineless species of *Rhipsalis* somewhat resemble certain species of *Psilocaulon*, and here the resemblance appears to end. Yet when carefully examined we find that in floral structure these two groups are more closely related to each other than they are to any other group of known plants and not only that, but each group is equally isolated from all others, so that they are probably very ancient types whose near relatives have passed into oblivion. In each group the petals and stamens are numerous and in two to several series, the stigmas vary in number, and the ovary is inferior, with four to twenty cells. No other group of plants has such a combination of characters.

Now, while Cacti are well known and widely cultivated in North America, the Mesembs, with the exception of a few species, are not so well known there as they deserve to be. For not only are there a large number of bushy and tufted leafy species that make a really grand floral display and are of fairly easy cultivation, especially where the rainfall is not too great and the frost not severe or continuous, so that they may be cultivated in the open air, as in the south of England. But the group also contains some of the most remarkable plants known to exist, which by their quaintness, biological and structural peculiarities greatly fascinate their cultivator. These, however, cannot be grown in the open air where there is much rain, they need

protection from too much moisture as well as from frost.

Until the past few years cultivators have paid much more attention to Cacti than to Mesembs, with the result that since the time if Linné the genera of Cacti have become more and more numerous, while Mesembryanthemum for over 170 years remained one large genus of numerous diverse types for which botanists failed to discover characters that would satisfactorily divide this large group of very varied forms into distinct genera. In 1921 and 1922, however, the writer separated three of these types from Mesembryanthemum and characterized new genera for their reception. But although this was done, a clue to the proper division into genera of the numerous types that still remained in the old genus *Mesembryanthemum* had not then been discovered, as the various characters that were noted seemed, from the cursory inspection given, to cross and intermingle in a most baffling manner. But after a careful investigation and dissection of such material (mostly dried specimens) as was available, and the tabulation of the numerous characters noticed, a work that occupied a large part of two years, it was found that by taking the very remarkable structure of the fruit as a primary character and utilizing it in conjunction with vegetative and floral characters, the whole group could be satisfactorily divided into distinct genera that could not only be recognized by a botanist, but in most cases can easily be distinguished by the cultivator by their habit and vegetative characters alone. So that instead of one vast genus with a number of sections without definite characters, and which in some cases contained two or three distinct types of structure, we now have a large number of well defined separate genera.

Now, among these may be found some of the most interesting and most curious of known plants, of which the genus *Lithops* is a good example. The members of this genus are remarkable not only on account of the window-like structure of the top of the lobes of each growth, but also because they so closely resemble the stones among which they grow that they are very difficult to find, as has already been detailed by Mr. West in this JOURNAL, vol. I. No. 2, p. 4.

But there is one fact about *Lithops* that seems

to be less generally known, which is, that during the very dry seasons they often have to endure, they sometimes completely disappear from sight and at others become as inconspicuous as possi-



Lithops pseudotruncatella (Berg) N. E. Br. x 2.

ble. This is brought about in this way. In Nature the species of *Lithops* grow buried in the ground, with only the top of the growths raised above the soil, and in the very dry season much of the water the plant contains is by degrees used up or evaporated, so that the growths become less and less in size, and shrink so that their tops sink to below the level of the old sheaths that surround their basal part and are level with, or below the level of the ground. While this is taking place the wind blows dust over the shrunken plants and either completely or partially hides them from view. This explains the comment of one lady who wrote to me concerning some other kinds of these plants (for some other genera besides *Lithops* act in a similar manner), that she "could not think where they all got to during the dry season." And also the statement of others residing in a region where *Lithops* grow, to the effect that they disappeared and buried themselves in the earth during part of the year.

Conophytum is another genus of much interest, which is probably not so well known in America as *Lithops* is, although it contains over 130 species. In South Africa the members of this

genus are called "Rock Viggies," because they usually grow in the hollows and crevices of the rocks, very few of the species being found to grow on open ground. A slight hollow in a rock with a little soil in it seems to suit the *Conophytums* admirably. They are the smallest of all the Mesembs, and the plants very rarely consist of a single growth, but are mostly composed of a cluster of globose, obconic, or two-lobed bodies or growths, varying in size from that of a very small pea to that of a large almond. So that they seem to have solved the problem of combining the minimum amount of evaporating surface with the maximum of watery contents. These bodies are each formed of two fleshy leaves that in some species are completely fused together except for a small flattened tube that extends up the center of the body from near its base to the orifice at the top. In other species the orifice is seated in a notch or depression at the top, and in still others the growth is more or less deeply divided into two lobes with the orifice at the base of the notch. The lobes represent the free tips of the leaves of which the growth is composed, and the central tube provides a passage through which the solitary flower emerges, for each growth produces only one flower each year, which endures several days. Some species expand their flowers only in the daytime and others only in the evening, and are white, yellow, pink or magenta; most are scentless, but



Photo by J. West
Lithops karasmontana Schw. x 2.5.

a few are pleasantly scented, the odor being something like that of cloves, and are often of much greater diameter than the growth bearing them. A well grown plant in flower is often quite attractive.

All *Conophytums* regularly go to rest once each year, and in England this annual holiday commences in May and lasts until the end of July. The symptoms of going to rest are a fading

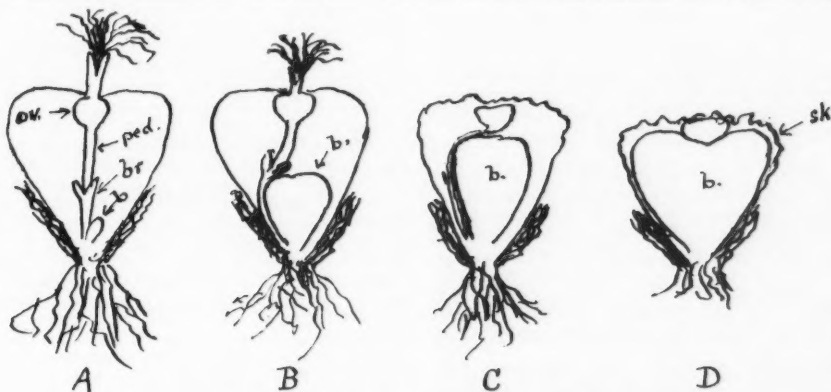
or other change of the healthy coloring, followed by shrinkage, and gradually the plant appears to be shrivelling, the skin becomes wrinkled and turns to a whitish, greyish or brown color. To anyone unaccustomed to the antics of these plants they would probably appear to be dying, but in reality it is a healthy condition to be encouraged. One cultivator informed the writer that when he first had some of these plants and they persisted in going to rest, he thought they were dead, and threw them all away!

The curious and gradual change from a vigorous, healthy plant to one that appears to be dying or dead is interesting to investigate. If a plump growth that has flowered is cut open down the center by the side of the remains of the flower in November or December its appearance will be something like that represented by fig. A, which shows that the dead flower arose from near the bottom of the interior of the fleshy growth and has a short peduncle with a pair of minute bracts (*br.*), and a pedicel (*ped.*) which raises the ovary (*ov.*) nearly up to or in some cases just outside of the mouth of the orifice. At the base of the peduncle on one side (or sometimes on both sides) of it is a minute bud (*b.*). After the seeds are perfected this bud commences to increase in size, and hidden inside the body of the growth, unseen and unsuspected, it gradually becomes larger and larger (figs. B-D, *b.*), absorbing the nutritive matter contained in the parent body and filling the whole interior of the latter, which becomes less and less and is finally reduced to a mere wrinkled skin (fig. D, *sk.*) enclosing the new growth with the ripened fruit at the top of it. The plant remains in this condition during the dry season. But when rains

again fall, it resumes growth, bursts the dried skin and becomes once more a plump, healthy looking plant, while the ripe fruit are blown away by the wind, part of the skin remaining as a wrinkled sheath around the lower part of the growth.

Most of the little plants belonging to this genus are opaque, but a few species are windowed at the top in the same manner as *Lithops*, and some of these windowed species are also divided across the top into two flat or convex-topped lobes so that they much resemble a *Lithops* in appearance, and before their flowers had been examined were mistaken as being members of that genus. These windowed species have been separated from the opaque species of *Conophytum* by Schwantes to form a distinct genus called *Ophthalmostylis*, but I do not think it can be upheld, as there are no structural characters that are not also possessed by the opaque species to support the distinction, and also because the window-structure insensibly passes through a series of species into the opaque type. Among these windowed species is *C. pellucidum*, which so closely resembles the granite rocks among which it grows, that Dr. Marloth informed me that he probably would not have discovered it had he not accidentally placed his hand upon a plant, so that it may be said that *C. pellucidum* was discovered by the sense of touch rather than by eyesight.

Of those species of *Conophytum* of which flowers are known to me, *C. fraternum* is always the first in the season to develop its flowers. These have a very long tube, and so stand well above the growth, are either pure white or pale pink and very attractive. *C. minutum*, *C. Pearsonii* and *C. Wettsteinii* all have magenta flow-



Conophytum. Diagram showing the mode of development.

ers and are wonderfully pretty. But the gem of the whole genus in my opinion is *C. minusculum*, for not only are its flowers of a rich magenta purple, but its tiny growths are charmingly marked with purple-brown lines and dots, enlivened with minute white specks on a grey-green ground.

(To be continued)

THE CACTUS PATCH

About this word cactuses, we carry no brief for this plural although the standard dictionaries give it as a perfectly good one, as does Mr. Baxter, our collector and contributor. Our editor believes in stimulating argument and criticism as an aid to circulation and her belief is justified even to the extent of a public call down. Mr. Orpet spoke "right out in meeting" against it, and our first vice-president frowningly opines that "a dignified, scholarly, botanical article should pluralize its Latin properly—cacti."

Our defense would seem puerile. Let it pass.

The Journal is assured that in the near future Mr. Vosburg will tell us something of succulents as ornamentals, rather than collections, that being in line with his landscape work.

Miss Kate Sessions, the grand old lady of the flowers, was a notable guest at the recent meeting of the Cactus Society at the McCabe gardens in San Diego. Tucked away in the extreme southwest corner of these United States, her activities in the fields of horticulture have yet spread her name all over the map. Rare trees and shrubs surround her handsome home atop of Soledad Mountain, the highest bit of land along the immediate coast line, and at present the expansion of her cactus garden is occupying some of her busy hours.

A short talk on the value of partial shade for these children of the sun, met with instant approval from that unregenerate wing which also would give an occasional drink to a thirsting spine!

Eugene R. Ziegler of Spencerport, New York, who has in times past expressed his appreciation of the Cactus JOURNAL, has recently issued a pamphlet on his seeds which is more than a catalogue. Mr. Ziegler specializes in rare and exotic cacti and the information herein contained will be prolific of interest to amateur and professional alike. Hints on propagation from seed is especially valuable to the former.

In browsing around among the local cactus people we came upon a collection of cactus and succulents belonging to father and son out in Montebello—Johnnie Dinsmoor and his father, each has his separate garden a mile apart. Both are pleased to receive visitors and both on the road to a successful venture. The elder Dinsmoor has lath and glass houses filled, for the most part, with thornless types, although the true cactus is not missing. Inspection, sale, and exchange are his specialties.

A comment recently made refers to elderly collectors as going in for succulents and the younger men still straying in the thorny path. Far be it from us to acknowledge the years, but we subscribe to a preference for succulents—so also John Vosburg and E. A. Orpet.

Mr. Walther's attention is called to the large specimen of *Senecio crassissimus* S. P. I., 77934, belonging to Miss Kate Sessions in San Diego, which also came from the Bureau of Plant Industry; so too, a smaller one in the greenhouse of Col. Kewen in South Pasadena.

Mention of *mammillaria bahniana* recalls a statement previously published that flowers are unknown. Mr. F. E. Cooper of Shanklin, Isle of Wight, England, writes the Journal that *M. bahniana* is a prolific bloomer: "flowers small, magenta in color, in circles much after the type and style of *M. rhodantha*, the deep purplish-red against the background being most conspicuous."

The Editorial Staff invites all those interested in the work and policy of the magazine to meet with them, 6 to 10 p. m. every Tuesday (except the third Tuesday in the month), at the Abbey San Encino, 6162 Pasadena Avenue, Los Angeles. (Enter by the gate directly opposite the Arroyo Seco Public Library.)

These Round Table meetings are informal, and are held to exchange ideas and to discuss the policy of the Journal. Anyone seriously interested in working on the magazine will have an opportunity and you will at last have ample opportunity to find the Editor and Assistant Editor in their lair!

—M. N. L.

THE SEPTEMBER MEETING

The small auditorium of the Arroyo Seco Branch of the L. A. Public Library was filled the evening of September 20 with members and friends, for the September meeting of the Cactus and Succulent Society.

Howard E. Gates, collector and explorer, who said he turned "desert rat" at the age of forty, was the speaker of the evening. Mr. Gates has recently returned from a trip to the tip of Baja California, and, using a colored map to illustrate his wanderings, his audience traveled with him from Nogales, Mexico, down past the Bay of the Dead (Bahia de los Muertos) to Cape San Lucas.

The speaker said in part: "This is the first year there has been a road continuous from one end of the peninsula to the other. When I speak of the 'Gulf' to Californians they are so unselfconscious of their great possessions and surroundings they think I refer to the Gulf of Mexico! I was the guest of the Mexican Government during the entire trip. Lower California is a quiet, peaceful country and the people courteous and hospitable. At the ranches one is always offered coffee which proves to be a full meal. On none of my trips into this country have I been endangered nor had anything stolen. There is nothing to fear if one is tactful and not domineering.

"There is a change as soon as the border is crossed. The climate is, if anything, better than ours, and the setting more picturesque. My first stop was made at the Hamilton Ranch after passing through Ensenada. This ranch of 300 acres is a guest house for travelers, and would make an admirable center for the cactus collector. We were never out of sight of columnar cacti for the whole one thousand miles. In places the stand is so dense as to be a forest. *Bergerocactus emoryi*, which used to be found as far north as Oceanside, is now seen on San Clemente Isle and the near mainland. At the Onyx Mines we re-fueled with gas at fifty cents per gallon. Onyx is the cheapest building material in that part of the country, and the local schoolhouse is built of it. We found another Joshua tree, *Yucca valida* and *Fouquieria peninsularis* covered with moss! Canyons filled with *Agave shawii* (the cabbage type), forests of *Pachycereus pringlei*, and numerous unknowns."

—J. M.



Photo by Prof. Duncan S. Johnson, Jan. 1919

Consolea spinosissima (Mill.) Lemaire
Hope River, Jamaica

Note on *Consolea corallicola*, Small

By N. L. BRITTON

The species of *Consolea* (No. 7) referred to by me in discussing this genus on page 228 of the first volume of this JOURNAL, as found by Dr. Small in Florida, has now been described in detail by him in *Addisonia*, 15:25, 26, plate 493, under this name, illustrated by a reproduction of one of Miss Eaton's beautiful and accurate watercolors. Dr. Small's studies of the genus show that in this species, as in several of the others, the seeds are pubescent, an original observation, and a character apparently to be added to the generic description; the Florida plant has

its nearest relative in *C. spinosissima*, of Jamaica; a photograph taken by Dr. Small on Big Pine Key is reproduced herewith. The name "Semaphore Cactus" used by him for these plants is self-explanatory.

To further illustrate the characteristic habit of *Consoleas*, we submit other photographs as follows:

Consolea spinosissima, the type species, photographed by Professor Duncan S. Johnson of Johns Hopkins University, at Hope River, Jamaica, in 1919.

Consolea rubescens, at Nisky, St. Thomas, photograph obtained by Rev. A. B. Romig in 1915.

Consolea rubescens, at Tallaboa, Porto Rico, photographed by Dr. Marshall A. Howe in 1906.



Photo from Rev. A. D. Romig, 1915
Consolea rubescens (Salm Dyck) Lemaire
Nisky, St. Thomas.
This tree belongs to the spineless race.



Photo by J. K. Small

Consolea corallicola Small
Hammock, Southeast end of Big Pine Key,
Florida, May, 1919.

The sale of "Texas Cacti" have so greatly exceeded expectations that we are now selling our fourth consignment of this splendid book.

As reviewed by Dr. N. L. Britton in the August issue of the Journal, it is a popular and scientific account of the Cacti native of Texas, by Ellen D. Schultz and Robert Runyon and from all appearances the entire membership of the Cactus and Succulent Society is acting on his recommendation that the book should be in the library of every one interested in Cacti. Should the sales continue, and we see no reason why they should not, it is probable that a second edition will have to be published.

The price is \$1.45 to any address in the United States and \$1.55 to foreign countries. Send orders to

G. A. Frick, 1800 Marengo St., Los Angeles, Calif., or Robert Runyon, 812 St. Charles St., Brownsville, Texas.

"The Cactus Book," by Dr. A. D. Houghton, is off the press and will be reviewed in next month's Journal. The book will sell for \$2.25 and can be purchased from G. A. Frick, Business Manager.

Howard E. Gates of Anaheim, Calif., is planning another three months' trip into Lower California this winter. The trip will be by land the entire length of the peninsula. The purpose of the trip will be to study and collect plants, and anyone interested should communicate with Mr. Gates. We trust he will continue his interesting articles in the Journal.



Young, unbranched Saguaros of the Colorado Desert

The Cactacean's Primer

By JACOLYN MANNING, M.D.

We are about to motor along old Indian trails, trudge in the sand and dirt of the American deserts, talk with illiterate people, and make acquaintance of the most ferocious and at the same time the handsomest savages in the plant world. Ralph Emerson once adjured us: "Let thy friend be ever to thee as a beautiful enemy." Just so. Untamed and beautiful savages the cacti will remain until the end of time, but fragrant, and stately, and endowed with the most subtle color harmonies. Handmaidens to the pagan gods they are also, bearing gifts of wine, and food, and lodging.

We may learn much of these primitives from the primitive race which has known and worshipped them since pre-historic times. We may learn from the Old Timer and the Desert Rat names so apt that they cling and will not go into the scientist's discard. We will, so far as possible, use our native tongue. The man who brought us the most stately and gorgeous cactus we have ever seen, a golden barrel of three hundredweight, did not know a Greek root from a Latin termination, but he did know by a primitive name every plant in the Desert Queen Valley, its root system, and period of bloom.

Pasadena, October, 1930. Copyright by Author.

THE DISTINCTIVE CHARACTERISTICS OF THE AMERICAN CACTUS

The Cactus Family is a very peculiar order of American plants.* They are classed with Xerophytes because their preferred conditions for living are dryness and warmth. They are spoken of as Succulents because storage of water and consequent juiciness of tissue is one of their essential life processes.

DIFFERENTIATING FROM OTHER SUCCULENTS

The most noticeable characteristic of the Cactus family is the heavy protective armor they carry of stiff hair, barbs, bristles, spines, hooks or thorns. The thistle, the thorn-apple tree, and the chestnut-burr are similarly armed against aggression. Cacti differ from these and other leaf-bearing armed vegetation, in that, with rare exception, Cacti are non-leaf-bearing.

Many plants of the American deserts have also developed a defense armor. There is the poniard at the out-standing tip of every leaf of the *Agave* or century plant. There is the cutting edge of the *Yucca* leaf, whether found on Our Lord's

*Century Dictionary.

Candles, or the grotesque Joshua. No rosetree bears sharper thorns than that splendid flag of the desert, the *Ocotilla*, with its scarlet blooms streaming high on the arid mesa. None of these plants belong to the Cactus family, although they are often classed as Cactus by the unobservant. All of these leaved plants may be readily distinguished from the Cacti of the desert which have no permanent leaves.

Many native Succulents, especially those that assume the rosette form, are sometimes confused with Cacti. No confusion will exist with the recognition that all plants of these classes from home or abroad, including *Sedums*, *Sempervivums*, *Echeverias*, *Crassulas*, *Cotyledons*, *Dudleyas*, *Mesembrianthemums* and others, are leaf-bearing plants. Cacti, with rare exceptions, do not bear leaves.

The free storage of juice in the tissues of the Cactus body or root is one method of insurance against death during long periods of aridity in the desert. This juice is usually watery and clear in color, and mucilaginous to limit evaporation. This system of life insurance, the storage of water, has been developed by plants living in arid deserts of other continents, notably the *Euphorbia* of Africa.

The *Euphorbias* form a considerable group of odd and handsome plants that somewhat resemble Cacti. They differ from cacti in that:

(a) Their juices are milky. *Euphorbia* when injured or pricked with a small pin exude a milky secretion. The tissue of Cactus plants, with few exceptions, contain a colorless, watery fluid, though some of the *Mammillaria* have latex ducts and milky juice.

(b) The flowers of the *Euphorbias* are relatively colorless and insignificant. The flowers of Cactus have no peer for beauty, fragrance and massed color.

Cacti are perennial plants. When grown from seed they begin life with two little seed leaves which they promptly shed and forget.

The two most important characteristics of the Cactus family, distinctive and delicate, are:

(a) Presence of areoles on the plant bodies.

(b) The fruit is an undivided berry, often edible and delicious.

Those lovers of Cactus, then, who wish always to recognize their "beautiful enemies," should keep in mind that the Cactus plant is a perennial, with two seed leaves, defense armor, watery tissues, no permanent leafage (with rare exceptions), develops areoles spaced out on its integument, and has a fruit which is a one-celled berry.

STRUCTURE

The Cactus plant unit consists of:

(a) Roots which may be fibrous, tuberous, or aerial.

(b) Stem or body which may or may not branch.

(c) Flower, fruit and seeds.

The roots (a) are usually fibrous. There may be a single taproot with small feeder roots or the root may consist of multiple fibers. The fibrous root may expand to carrot shape and be continuous with body of plant. In rooting a cactus cutting it may be readily seen that delicate feeder roots first issue from one or more areoles. In rooting a cactus plant a cluster of white fibres will be seen to issue from its base.

A good example of the expanded or carrot-shaped root is the Peyote or Mescal button, a cactus with such extraordinary qualities that it was twice re-christened by white men—"sacred mushroom" and "dry whiskey"—besides its scientific cognomen, *Lophophora williamsii*. Its juices are intoxicating and react especially on the optic nerve producing magnificent illusions of color. The Indians still make use of it in their religious rituals, as an agent which transports them temporarily to the aboriginal heaven. The root is continuous with the shapely body of pale jade-green, and a colony (which may be seen in spring in the Huntington Botanic Garden) in bloom, with the relatively large delicate pink centrally placed flowers is a pleasing sight.

Many of the Cacti of the Mojave and Colorado deserts have root systems of multiple fibres, which spread widely in every direction in search for moisture. The Sahuaro, *Carnegiea gigantea*, spreads a wide net of roots to garner the near surface moisture, and is itself, a stately standing reservoir of water.

Two of our most distinguished Cacti of the Southwest carry their water reservoirs underground. Their roots are tubers, their stems are slender, inconspicuous and hidden in the chaparral, are hard to find. If the Chaparral cactus, *Peniocereus greggii*, could talk it would tell us the fatal curse of beauty which forced it to burrow into the ground with its storage tank. It is a nightblooming *Cereus* of such loveliness and with a fragrance so rich that collectors use the perfume as a guide when searching for the plant. Its root system is a tuber which increases in size with the years and may reach an amazing one-hundredweight. I found the Chaparral cactus in a remote Arizona Valley while on pilgrimage to the Giant sahuaro. The month was April, and they were not yet in bloom. I did not

disturb them, though I greatly wished to examine their very unusual roots. The stems are slender, velvety, and inconspicuous; it is doubtless this velvet finish, as well as the slight branching of the stems, suggested the local name of Deerhorn Cactus. Two plants which came from Texas have tuberous roots that resemble sweet potatoes, somewhat dried and discolored, and weigh about a pound each.

The Lead-pencil Cactus, *Wilcoxia poselgeri*, of the high steppes of Texas, has a root system of multiple tubers. Dependent from the base of the plant, they lie within four inches of the surface of the ground; they are small, rounded, of a translucent look, the color of old ivory, which darkens to black on exposure to light. When freshly dug they look good enough to eat, and the native Indians use them as medicine. We do wonder for what ailment they are prescribed.

Those delicate fingers which we term aerial roots when appearing on a young cactus plant, indicate its relationship to the climbing Cacti of the Central American jungle. The aerial roots usually appear on the integument between the areoles, near the tip of the aspiring stem.

The stem (b) or body of a Cactus plant may be cylindrical, globose, or flattened. It may consist of one, or many heads; it may present the appearance of a flat and slightly concave dish, or develop into a stately column either branched or unbranched; it may resemble a scalloped ribbon, or a beaded string. The structure of all of these singular forms, however, remains much the same. There is a scaffolding of more or less woody tissue, surrounded by a juicy, mucilaginous pulp, and encased with a tough integument. This integument is capable of expansion and contraction according to the amount of water in storage. The evaporation of water is checked by an external coat of waxy material. Exceedingly minute breathing pores, called stomata, ramify through this dense covering, but remain invisible to the naked eye.

AREOLES

Areoles are found on the integument of the cactus body, fruit and ripening ovary; they are regularly spaced out, at considerable intervals, or closely approximated. They appear in the axils of rudimentary unseen leaves, as small felted cushions, from which develop spines, flowers, and fruit. The areoles on *Opuntia* stems and pads also develop a special guardian to each tiny gateway—a little standing army of minute barbed bristles, called glochidia, which eternally "present arms." Areoles outline the ribs of col-

umnar cacti, and crown the tubercles of *Mammillarias*. Areoles, their system of development, and the amazing objects to which they give birth in the way of spines, hair, etc., are intensely interesting. The word areole, botanically, is defined as a little mesh or small open space, but we have seen it includes the contents of the space. It was only when I conceived the cactus areole as both the knothole and the knot that the subject became illuminated. Areoles are peculiar formations of Cactus, and are not found on other plants.

SPINES

If the Cactus gardener has had the misfortune to lose a fine Barrel Cactus, he has noted that during the disintegration of the plant the clusters of ferocious spines fell away as complete, handsome and uninjured units. So readily has the detachment taken place it is evident the spine cluster had no fibrous or woody connection to the plant's skeletal axis. Holding one of these spine clusters in hand it is readily apparent that there is a whorl of spines whose duty had been to protect and as it were, blanket the body of the plant. This wheel of spines, whose plane is parallel with the plane of the plant's surface, is called radial spines. From the center of this whorl one or more spines, longer, stronger and more viciously fashioned, stand out at right angles to the surface plane. This second group are known as central spines. Their hooks are always sharp, and their bayonets fixed to repel marauders.

The classification of many varieties of cacti turn on the relative number, and position, and curvature, of the radial and central spines, in a spine cluster, as well as their size, color, length and markings.

The characteristics of spines were described and given vivid illustration by Ysabel Wright and Margaret Kincher in the June, 1930, issue of the JOURNAL, but their decorative values remain to be told.

The variations of color in the spines of desert cacti are very subtle, and the range of pastel shades evoked more delicate than that of their own flowers. In garden arrangement the cactus lover has here an inexhaustible source of joy. The light of dawn, the hot sunshine, and the mauve sunsets evoke unsuspected color harmonies from these tawny savages of our American deserts.

Savage uses were made of the most ferocious of the spines taken from the great golden barrels of Old Mexico.

FLOWERS, FRUIT AND SEED

The floriation of the Cactus family is unrivaled for color range, and color mass, and is notable for the size, grace, beauty of outline, and fragrance, of its night-blooming members.

The flowers are usually stemless, budding directly from the plant body, and solitary; when a circle of these vivid blooms crown the cactus stem they give a clustered effect.

The flower consists of scaled bracts spirally arranged, which lengthen, and modify in color, until they form both the sepal-like cover, and the petals they enclose. As a flower opens, one notes in its center the great number of delicate stamen filaments with their nodding anthers which form a setting for the gay jewel of the stigma rising from their midst. The style of the cactus flower has marked individuality and lavishes color on its stigma contrasting with the color of the flower petals, so that sometimes a turquoise star (or amber or emerald) will be found centered in a rosy flower cup.

The fruit which develops from a fertilized bloom is known botanically as a berry. It is one-celled as you discover when you have the pleasure of eating one of the rose-tinted fruits of various columnar cerei; the white or rose-colored flesh of this particular "berry" contains many small black or brown seeds which are as readily detached from the pulp as seeds in a ripe watermelon.

Not all cactus fruits are juicy. The seed vessel of the Barrel Cactus, *Ferocactus*, is dry and round, about the size of a large marble, and stuffed with shining black seed. It is a very tricky subject to harvest. The fruit bristles with harsh scales, and is set deep into a nest of wicked spines. It is firmly attached, until ripe, to the cactus body. Do not pluck it until ripe if you desire fertile seed. And now, beware! The seeds, in scientific terms, "dehisce by a basal pore," and pour out they will and be lost in the maze of spines, if you have not a little round spoon ready to slip beneath and catch them as you lift the seed-pod.

A New Book

"The Green Leaf," by Dr. D. T. MacDougal, is a book recently published by D. Appleton & Co. of New York. Pp. 140. Price \$2.00. Most collectors of Cacti are familiar with the name and work of Dr. Daniel T. MacDougal who is the distinguished botanist of the Carnegie Desert Laboratory at Tucson, Arizona. "The Green

Leaf" is done in simple, not too technical language and contains much of pleasantly sugar-coated scientific information which will be found most interesting. One chapter entitled "Green Stems" is of particular interest to our members as Dr. MacDougal tells how Cacti get water and store it so that they can withstand the aridity of the desert.

G. A. F.



? ? ? ? ?

Out of Germany comes this picture of *Euphorbia bandiensis* Burch., with the correctness of the name uncertain. The nomenclator, Prof. Dr. G. Enderlein of Berlin, requests that he be informed if a mistake has been made, and asks that the correct name of this species be sent him.

This is a single plant and was found in the veldt just as the picture shows it growing with the natural and the crested form on the one root system.

A description of *E. bandiensis* can not be found either as a species or a synonym in any of the available work on the genus *Euphorbia*, so your guess is just as good as mine; I feel safe in saying that it belongs to the section *POLYGONAE*, but beyond that I will not venture.

G. A. FRICK.

Notes from Huntington Botanical Garden

By ERIC WALTHER

No. 3 A.x hertrichii, new hybrid

Of the various worthwhile services a Botanic Garden located in Southern California should perform, the careful breeding and selection of useful hybrid exotics is by no means the least important. Especially does this apply to drought-resistant xerophytes as Aloes and other related succulents. In line with this purpose Mr. William Hertrich has for some time given special attention to cross-pollenization of the various Aloe-species grown in the collection of the Huntington Botanic Garden at San Marino.

In the course of this work thousands of seedlings have been raised, and quite a number of these are now reaching the flowering stage. While, of course, many of these do not possess sufficient merit to warrant their perpetuation, we would like to single out at this time one hybrid for further mention. The plant in question was raised from seed of *A. vera* impregnated with pollen of *A. lineata*, and combines the ever-blooming habit of its seed-parent with the brighter flower-color of the pollen-parent. It may well be destined to become widely distributed, its long-flowering season making it a most desirable acquisition, not only for succulent-collections, but general garden purposes as well. Under the circumstances we consider it expedient to briefly describe and also name this particular hybrid.

A.X HERTRICHII, NEW HYBRID

Seedling No. 232, Huntington Botanic Garden, San Marino; flowering for the first time in the winter 1929-30. Type in herbarium of the California Academy of Sciences, San Francisco. Plant a hybrid of *A. vera* and *A. lineata*, the former being the seedparent;

Rosettes acaulescent so far, becoming caespitose;

Leaves spreading-ascending, narrowly deltoid-lanceolate, 30 to 40 cm. long by 7 cm. wide or more at base, 10 to 15 mm. thick, convex on both sides, becoming flattened above towards the acuminate, slightly falcate apex; with prominent



Photo by J. West

Aloe x. hertrichii, new hybrid. App. x 0.1

Teeth that are 3 to 5 mm. long and 5 to 15 mm. distant, closer below, their horny, brownish tips pointing slightly forward; color (Ridgeway) vetiver green, slightly glaucous, not spotted.

Inflorescence lateral, a 3 to 4-branched panicle, the branches rather dense racemes 40 to 50 cm. long, the central one the longest;

Bracts scarious, deltoid-acuminate, with about 20 nerves, largest to 25 mm. long by 20 mm. wide, densely imbricated in bud;

Pedicels about 10 mm. long, equalling the subtending bracts, erect;

Flowers very numerous, slightly pendulous, flame-scarlet when open;

Perianth 30 mm. long, trigonous-cylindric, base stipitate to rounded;

Segments free nearly to base, spreading-recurved at apex, lined deep grape-green towards tip;

Stamens and *style* exerted for about 10 mm.;

Anthers orange-rufous;

Ovary long-conic, rather abruptly contracted into style;

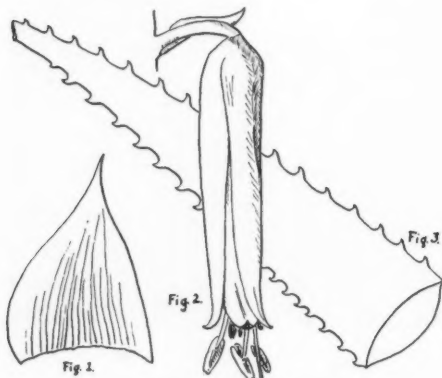
Stigma capitate;

Fruit as yet unknown.

* * *

The hybrid inherits the color of *A. lineata*, as well as the size and shape of its flowers with their nearly free segments and also the conspicuously imbricate bracts; while from *A. vera* it derives the branched panicle and perhaps also the acaulescent habit.

Except for the absence, so far, of any evident stem, it runs quite nicely into *A. lineata*, in Berger's key.



Aloe x. hertrichii, new hybrid

Fig. 1. Bract, app. $\times 1.5$

Fig. 2. Perianth, app. $\times 1.5$

Fig. 3. Portion of leaf, app. $\times 0.25$

MEXICAN

CACTUS REGULATIONS

The following synopsis of the present regulations covering the collection and exportation of Mexican cacti is prepared from the translation of a proclamation issued by President Ortiz Rubio, under date of June 5, 1930, and published in *El Diario Oficial* on July 10, 1930.

The preamble recites that as Mexico is one of the most important cactus countries and that as the exploitation of cacti has assumed such proportions as to threaten the extinction of certain species, to the detriment of the nation, the President has issued these regulations under the authority of the Constitution and the Forestry Laws of April 5, 1926, and September 8, 1927.

The regulations require that permits be secured from the National Secretario de Agricultura y Fomento, or officials designated by him. These permits are not transferable and are valid only for the periods stated in them. They are divided into commercial permits and scientific permits, and are further divided into permits for collection on national lands and lands of municipalities and private owners.

Before collection on national lands, approval of an official of the Forestry Service is necessary, to insure that collection is not detrimental to public interests. On other lands the collector must secure written permission of the local authorities or private owners.

The right of collection is given to the Mexican National Botanic Gardens on any land, wherever desirable specimens are found. Other scientific institutions must prove that their collections are for scientific purposes before permits will be issued.

Exemption is given to citizens of known poverty for the purpose of collecting and selling small quantities of edible cacti fruits.

Provision is made for the cancellation of permits where the collector does not comply with the laws and regulations.

An open and a closed season is provided. Collections and exportations may only be made between January 1st and July 31st of each year.

The exportation of fruits and seeds of cacti is absolutely prohibited.

El Secretario de Agricultura y Fomento will annually publish a list of species on which exportation is prohibited.

Collectors who wish to export, must obtain

certificates of origin from the nearest official of the Forestry Service.

All exporters of cacti are required to send five specimens of rare plants for each shipment, to the Chapultepec Botanic Garden at Mexico City. It is not made clear, but presumably this means five specimens of each species of rare plants that is exported.

All Customs Officials are instructed to co-operate with El Secretario de Agricultura y Fomento to prevent the exportation of plants without certificates of origin, by those not holding permits, or those who have not sent the specified plants to Chapultepec.

Violators are subject to the penalties of the current Forestry Law.

While the proclamation does not state the exact fees to be charged an official letter from

the Direccion Forestal y de Caza y Pesca, a Bureau of the Department of Agriculture, under date of July 12, 1930, states that a fee of one hundred pesos will be collected for each commercial permit. At present exchange this is about forty-five dollars. Apparently there is no limit to the business that may be done under one permit. In addition there undoubtedly will be the regular export duties. The last season these amounted to one centavo per kilo. There are also port and government fees amounting to from ten to twenty dollars on each shipment by water.

This same letter advises that scientific institutions may secure permits free providing they furnish a certificate showing that the collections are to be used exclusively for scientific purposes.

Translated and prepared by Howard E. Gates.

Cactuses vs. Cacti

A trip to Mr. Webster's dictionary will clear up a lot of discussion regarding a topic that us cactus people argue about. We can say "cactuses" if we want to or we can say "cacti" if we want to, and with a little care about the rest of our talk, we will be right.

"Cacti" is easy to write but a little harder to say. Some of us call it *cact-eye*, and that sounds pretty good. Sometimes we get more snooty and say it *cock-tee*, it sound like a million but is liable to scare away further conversation from our listener. The one that sounds best and isn't quite so uppity is *cac-ti(t)* leaving off the last *t* but keeping the short sound of the *i*. This one compares with the pronunciation of "aunt" that sounds almost like *a-a-aunt* but isn't, if you know what I mean.

"Cactuses" is good old English pluralizing (again if you know what I mean). The seventh grade grammar books used to say "to make the plural form of a noun add 's' to a word ending in anything but 's' and the letters 'es' to such a word. Education has progressed rapidly since then but us old-timers might still follow the same rule. And it is a lot easier to say and be sure one is right. Put the accent on the "cac" part and there you are!

Mister Webster says that *cacti* pronounced "cact-eye" is the correct Latin plural for *cactus*;

and that *cactuses* is the English form.

Take your choice. If you lisp, for golly's sakes stick to *cacti*. If you are a lawyer, or a person with a tendency to use such words as *non-composmentos*, or *vice-versa*, or *ne-plus-ultra*, or *babeas corpus*, then go ahead and say *cacti*. It is an old gag for people to try to make their job sound hard, and if they can say *medulla oblongata* instead of *knee-cap* (or whatever it is, you know what I mean), then they can charge you a couple of dollars extra and say it's for the time they spent learning those words.

But then . . . let's be liberal. Let's give a man who only has a couple of these things on his tongue a chance to use them once in a while. Let's let him say *cacti* and not even smile if he says *cock-tee*. It's easy to be big-hearted in such matters.

And as for us, ourselves? If you are a botanist and are used to saying such words as *Nopaloxbia*, *Machaerocereus*, *Epithelantha* (take it slow and easy), *Leuchtenbergia*, or *Echinofossulocactus*, when talking about cactuses, then *cacti* is a pretty good word to use. But if you get stuck on *Opuntia* and *Ferocactus* then maybe you better stay with me on *cactuses*.

Grampa
(Nom de plume, if you get
what I mean)

The Genus *Rosularia*

By JAMES WEST



Photo by J. West
Rosularia sempervivum (Marsth. Bieb) Berger
Plant in bud.
(*Umbilicus pestalozzae* Boiss.)

The species belonging to this minor genus of the Crassulaceae are less known and grown than they perhaps deserve. Thought not strictly showy in the sense that *Echeverias* or *Cotyledons* are, they are yet distinctly attractive plants, with the additional advantage of being capable of cultivation in climates and situations unsuitable to the majority of succulent plants. They are distinctly more hardy than the general run of South African and Mexican succulents, classing in this respect about halfway between the alpine *Semperviva* and the half-hardy *Sedums* from Mexico.

Their native habitat is in the mountains of Western Asia, their extreme limits being the Greek Archipelago on the west and the Altai on the east.

The genus *Rosularia* (D.C.) Stapf was created recently (1923) to include a number of species formerly classed either as *Umbilicus* or *Cotyledon*; it is accepted by Alwin Berger in his latest treatment of the family.* Under *Umbilicus* are

now retained only the species characterized by more or less peltate leaves, not in rosettes, and tuberous roots, the best-known of which is that curious plant called Venus' Navelwort (*Umbilicus pendulinus* D.C., *Cotyledon umbilicus* — *Veneris* L.), with its round, glossy-green dish-shaped leaves and tall stems of nodding greenish flowers, an illustration of which we hope to present in a future issue of the JOURNAL.

The very different-appearing species hitherto also variously encountered under the name of *Cotyledon* or *Umbilicus*, of *Sempervivum*-like habit, with leaves in rosettes, are the *Rosularias* (from Latin *rosula* = a little rose, a rosette).

The accompanying illustrations will give a good idea of their general appearance. The leaves of most of the species are flat and more or less spatulate, the stemless rosettes making offsets in the manner of the alpine *Semperviva*. The flowers are terminal or axillary, arranged in loose racemes, 5 corolla-segments, longer than the sepals, united into a campanulate tube for part of their length, the free tips slightly reflexed, stamens 10, carpels erect. The color of the flowers is white or whitish, yellow, pink or red.

One of the best known is *R. persica* (Boiss.) Berg. (*Umbilicus persicus* Boiss.; *U. libanoticus* v. *glaber* Boiss.; *Sedum Sempervivum* v. *glabrum* Hamet). This is attractive little plant with its flattish rosette of smooth bright green leaves edged with minute sharp cartilaginous teeth; the leaf-tips are truncate or slightly retuse, the outer leaves being longer and looser than the tightly crowded ones at the center, which are slightly glaucous. The effect is somewhat that of a dwarf *Greenovia*. The graceful stem of small nodding pale pink flowers arises from the center, the flowering rosettes becoming exhausted by the effort and dying, as in *Sempervivum*, to be replaced by the offsets. *R. persica* comes from the mountains of Asia Minor (Lebanon and Anti-Lebanon), Kurdistan and Persia. It is recorded as reaching an altitude of 3,000 m. (12,000 ft.), so that this plant may be considered as a thorough-going alpine and may be expected to prove hardy in most parts of the United States.

This species, and its congeners, as far as we have had opportunity to observe them, thrive best (in California) in cool and half-shady posi-

*In A. Engler, Die Naturlichen Pflanzenfamilien, 2d. Ed., vol. 18a., W. Engelmann, Leipzig, 1930.

tions, not too dry but well-drained. In too hot and dry a location they soon manifest their dislike by shrinking to a yellowed rudiment of their former lush and healthy selves.



Photo by J. West

Flowering plant of *Rosularia sempervivum*.

As yet, not many of the 20 or more species known to exist are in cultivation in this country. One of the few of their devotees is our good and sempervivaceous friend Frank Kenne of Mill Valley, California, in whose always interesting garden we found the subject of our photographs. Among other species appearing in cultivation we may mention the subject of our illustrations, *R. Sempervivum* (Marsch. Bieb.) Berg., a plant of many synonyms, which we append in full as it is likely to appear under any of these aliases in collections: *Cotyledon Sempervivum* Marsch. Bieb.); *Umbilicus Sempervivum* Marsch. Bieb.; *Sedum Sempervivum* Hamet; *Sedum libanoticum* L.; *Cotyledon libanoticus* Lab.; *Umbilicus libanoticus* D.C.; *Umbilicus Pestalozzae* Boiss. This species is rather similar to the former, except that the leaves instead of being glabrous, are finely glandular-hairy. The flowers are abundant, purplish-pink. It is a most attractive plant, native from the Caucasus to Mt. Tabor in Palestine.

R. platyphylla (Schrenk) Berg., from Central Asia (Altai) has very flat, broad leaves, glandular hairy, with longer hair along the margins. Rather different in appearance from the three last-mentioned, and quite one of the most charming of the genus, is a plant which we call with some hesitation *R. pallida* (Schott & Kotschy) Stapf (*Umbilicus chrysanthus* Boiss.; *Sedum chrysanthum* R. Hamet; *Sempervivum aizoon* Hort.). This is thoroughly sempervivum-like, forming a dense cluster of compact little rosettes of numerous, hairy, light green, rather narrow leaves. Our specimens have not as yet flowered. If we are correct in our identification, the inflorescence should consist of a loose forking panicle, about 8 in. high, of large erect whitish flowers, their petals united for about one-fourth of their length. If they turn out to be golden yellow, petals united to $\frac{1}{3}$ of their length, inflorescence 3 to 4 in. high, the plant may be *R. Aizoon* (Fenzl) Berg. (*U. Aizoon* Fenzl; *Sedum chrysanthum* v. *Aizoon* Hamet; *Cotyledon Aizoon* Schönl.). Any reader in possession of flowering material will oblige by sending in specimens. (The plant is likely to be labeled either *Cotyledon chrysanthum* or *Sempervivum aizoon*, the seed having been distributed under both names by Mr. Correvon of Geneva, Switzerland.)

In the next issue we hope to reproduce a photograph of the plant in question.

EXCHANGES

Conducted by MRS. W. M. KETTERINGHAM
610 West 65th Street, Los Angeles

Mail a list of your duplicate plants to the above address stating what you wish in exchange. Enclose postage for reply.

Exchanges Offered

Cereus flagelliformis and *C. grandiflorus*; *Epi-
phyllum russellianum* and *E. truncatum*; *Kalan-
choe longiflora*, *Phyllocactus latifrons*, and
Stapelia gigantea, *charybdis*, and *mermis*.
Want to exchange for *Crassula falcata*, *Roc-
chea coccinea*, *Mesembrianthemum speciosum*, Haw.,
Trichodiadema stellatum and *Phyllocacti*.

50 each of one year old rare aloe seedlings;
Aloe striata, *A. petricola*, *A. peglarea*, *A. accu-
leata*, and *A. wickensii*, want to exchange for
succulents (no cacti) preferably *Haworthias*,
Gasterias, *Agaves*, *Apricas*, *Euphorbias*, *Mesem-
brianthemums*, etc., of similar age or older.

SECRETARY'S COLUMN

Couldn't you just feel the "Spirit of Santa Barbara" in the kindly reception given us at our last meeting?

We express to Dr. and Mrs. Bissell and to our many other hosts our appreciation for a very pleasant visit.

Members have since remarked that they are ready to attend another meeting in Santa Barbara. We are looking forward to another meeting there next fall.

The committee to nominate officers for the ensuing year was named at the October meeting. As soon as the report, of the committee is received, ballots will be mailed to the members as provided in Article II of the By-Laws.

During the present year our membership list has increased by more than four hundred. Except at the time of the Show when the growth was accelerated, there has been a steady growth. This is almost entirely due to the quiet work on the part of the members in interesting their friends in the work of the Society.

Do your Christmas shopping early! What greater joy could the cacti or succulent lover have than to receive with his Christmas card a membership card of the Society!

May I urge you to renew your subscription early. Back numbers of the Journal are not always available and it isn't safe to miss a single number. More requests have been received for bound copies of Vol. I than there are copies available.

Our President Emeritus, Dr. A. D. Houghton, has just returned from a visit to some of the prominent botanical gardens of the East. He reports that the Society is well known in that section. We trust that Doctor will tell of his visit in the near future.

The December meeting of the Society will be held in the Los Angeles Public Library on Hope Street, Friday evening, December 19th, at 8 P. M.

BOYD L. SLOANE, Secretary.

Next issue of the Journal will contain more of Mrs. Wright's excellent articles. N. E. Brown, Dr. Britton and our dependable friends, West and Walther, will each contribute to the December issue. The Journal is proud of the generous efforts and loyalty of all who are contributing.

There were fourteen entries of Cacti and Succulents at the Pasadena Horticultural Flower Show, October 22-24th. Soldena Gardens won first prize in Succulents while J. A. Ekdorf won first prize in Cacti. Mrs. Haviland of Monrovia was also a prize winner. G. A. Frick entered a non-competitive collection of 24 Euphorbias, 21 of which have never been shown in the United States. G. A. Frick and E. A. Orpet were judges.

BOUND EDITION OF VOL. I

Journal of the Cactus and
Succulent Society of America

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EDITOR—THE CACTUS SOCIETY JOURNAL

Abbey San Encino
6162 Pasadena Ave., Los Angeles

THE OCTOBER MEETING AND SANTA BARBARA REGION

By JACOLYN MANNING, M.D.

Members of the Society were guests of the Blaksley Botanic Garden of Santa Barbara on October 19th. The meeting was called to order by President Willis. A committee for nominating of officers for the coming year was elected to report at the November meeting.

In the temporary absence of Dr. Elmer Bissell, Mrs. Bissell spoke briefly of the origin of the garden as a quarry, of boulders from prehistoric times, and the plan of subdividing for public sale, when Mrs. Bliss offered to buy the magnificent canyon, and donate it to the public as a perpetual botanic garden in memory of her father; it was stipulated the garden should be one of native plants set in communities, and the meeting was held in the Desert Community. The first large collection of Mexican cacti was made by Howard Gates of Anaheim, a member of the Cactus Society. Collections were also made from all the Channel Islands. The various gardens which make up the unit are all open from sunrise to sunset daily to the public.

Mr. W. J. Pettingill, the superintendent, in reply to questions stated it was better to set out cacti after warm weather began in Spring; that this garden had been watered but three times during the present season; that cacti would grow in 'dobe' soil, although it was always best to elevate surface of bed at least ten inches to secure ample drainage.

The assembly of eighty members were cordially invited to come again in April, May or June, when the gardens are a Persian carpet of beauty.

After adjournment members were conducted by Miss Pearl Chase to a rapid tour through the Botanic Garden at the Santa Barbara Museum, and the series of gardens at Mira Flores of the Jefferson estate. The enclosed Spanish garden was most enchanting for its spirited use of gay Spanish tiles adorning a splendid fountain, many garden benches, and a facade delineating the history of Spain in America. We also noted a clever out-of-door theatre, a blue garden, and a series of removable iron grids about trees which permit the placing of various lovely succulents—potted—in the half shade they dearly love.

The visitors at Mr. Orpet's extensive nursery on Sunday morning were so numerous a man had to be detailed to attend the traffic. We reserved our call until the following day, and, unhurried, made the acquaintance of many distinguished plants from home and abroad. Madame Orpet is an authority on *Bougainvillea*, and the several varieties in bloom draped opposite wings of the house as well as the garden sheds. We found *Bryophyllum daigremontianum* the most amusing as well as handsome novelty; standing 3-4 feet high the edges of its long leaves are tasseled with tiny plants regularly spaced out, which drop and take root when they tire of aerial life. The last available spaces in our car were utilized to pack away boxes of treasure obligingly packed by young Mr. Orpet.

The unsurpassed Coast Drive was made in glittering sunshine both going and returning, with breakers forever dashing at the feet of the great headlands that thrust out into the Pacific Ocean. We stopped by appointment to call on Mrs. M. S. Francis of Ventura, and spent a happy hour in that Cactus Garden planted forty years ago, and still containing rarities not found in other collections. Many of the succulents have hybridized from terrace to terrace, and the garden is sought out now and then by distinguished authorities. We were rewarded by a most instructive conversation with the garden's lovely and practical chatelaine.

This garden was the Theodosia Shepherd Cactus Garden of many years ago.



The following first year seedlings are available at 50c each, \$5.00 per dozen. This is the last time these seedlings will be offered at this price as the supply is limited and those remaining will be grown to second year size before being offered again.

Lemaireocereus dumortieri
Lemaireocereus stellatus
Lemaireocereus de Mixteca
Lemaireocereus de Toliman
Lemaireocereus Quarotaroensis
Lemaireocereus Weberii
Lemaireocereus chiotilla

Pachycereus marginatus
Coryphantha glandulifera
Coryphantha bumamma
Coryphantha cornifera
Echinocactus Vaupeliano
Cephalocereus cometes
Mammillaria sp. from Mexico

The Following RARE CACTUS SEED Are Available

50 sp. Mexican OPUNTIA, with native names, 1 gram of each	50 grams	\$5.00
OPUNTIA TUNICATHA and OPUNTIA MOELLERIANA	per gram	1.50
ECHINOCACTUS MOELLERIANA, new and very rare	per gram	3.00
ECHINOCACTUS HEXAEDROPHORUS, dark green, red spines	per gram	3.00
ECHINOCACTUS PILOSUS, red spines, white hairs	per gram	2.50
MAMMILLARIA KLISINGIANA and LEUCHTENBERGIA PRINCIPIS	100 seed	1.00
MAMMILLARIA MICROMERIS sp. with soft spines, "rabbits hair"	100 seed	1.00
ASTROPHYTUM, many sp. at various prices, ASTROPHYTUM ORNATUM	per gram	2.00
CEPHALOCEREUS ROYENII, rare plant from Porto Rico	per gram	1.50
CORYPHANTHA RUNYONII, rare plant similar to MACROMERIS but with large pinkish blooms	per gram	.25
SELENICEREUS sp. very fertile seeds of a beautiful plant	per gram	.50
HYLOCEREUS POLYRHIZUS, Blooms 14 inches in diameter, reddish on outside, white inside,		
3 angled plant similar to H. Ocamponis	per gram	2.00
CEPHALOCEREUS SENILIS, true "Old Man," about 400 seeds	per gram	1.50

RARE PLANTS AND CUTTINGS

CACTUS INTORTUS and another species nearly as large, with a CEPHALIUM at least 2 inches tall, or taller when available, 15 to 20 lbs. postpaid. . . \$15.00
 CEPHALOCEREUS ROYENII, cuttings of the flowering branches, per foot. . . \$ 5.00

These cuts are very hairy and have the flowering areoles. Sizes to 30 inches.

LEPTOCEREUS QUADRICOSTATUS, of interest to collectors, per foot. . . \$ 2.00

NOTICE

Because of the fact that the Mexican Government has passed a law prohibiting the export of Cactus Seed, there is a very real danger that unless you order the Mexican species as soon as possible, the supply on hand will be exhausted before planting time comes around. A deposit will hold the seed until you are ready.

CORRESPONDENTS WANTED

I am very anxious to correspond with fanciers and collectors of Cacti, Euphorbia and Succulents in all parts of the world. Also, persons wishing to make exchanges of seed or plants, please list your plants, stating prices at which you value them and size or a description of plant if the Botanical name is not known.

EUGENE R. ZIEGLER, Spencerport, N. Y.

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